**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

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| BARCO, INC. and BARCO NV, | ) |
| | ) |
| Plaintiffs, | ) |
| | ) Case No. 2:23-CV-00521-JRG-RSP |
| | ) |
| v. | ) |
| | ) |
| YEALINK (USA) NETWORK | ) |
| TECHNOLOGY CO., LTD., and | ) |
| YEALINK NETWORK | ) |
| TECHNOLOGY CO., LTD. | ) |
| | ) |
| Defendants. | ) |
| | ) |

## PLAINTIFFS' REPLY CLAIM CONSTRUCTION BRIEF

**TABLE OF CONTENTS**

## I.    INTRODUCTION

Yealink's claim construction brief advances only non-dispositive invalidity arguments that certain claim terms are indefinite.[1]  In each instance, Yealink misapplies impertinent case law in an attempt to manufacture ambiguity for a subset of the asserted claims.  Yealink's arguments are unavailing and fail to meet the clear and convincing evidence burden required to invalidate patent claims.  Barco's proposed claim construction is consistent with and supported by well-established claim construction case law and should be adopted.

## II.    CONSTRUCTION OF TERMS

### A.    "means for audio communication" (the '002 Patent)[2]

Barco and Yealink agree to the structure, function, and certain exemplary disclosures of the "means for audio communication".  *See* ECF 65, P.R. 4-3 Joint Claim Construction Statement, Ex. B.  Yealink, however, disputes the validity of the means-plus-function term, arguing instead that an alleged ambiguity of this term renders Claim 1 of the '002 Patent and '676 Patent indefinite. The basis for Yealink's argument was not clear until it filed its Responsive Claim Construction Brief, asserting an alleged lack of disclosure of a specific "algorithm" renders the claim term indefinite.  Yealink's argument misapplies the law and fails because (1) the "means for audio communication" provides an undisputed structure of "an interface using a generic communications protocol" (for example, a Universal Serial Bus or "USB" at, e.g., ECF 71, Ex. A, 31:45-60), which

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[1] Yealink admits infringement of each asserted patent, including Claim 11 of the '002 Patent (ECF 71, Ex. A) and claims 1 of the '832 Patent (ECF 71, Ex. B), '103 Patent (ECF 71, Ex. C), '676 Patent (ECF 71, Ex. D), '237 Patent (ECF 71, Ex. E), and '951 Patent (ECF 71, Ex. F). ECF 47 (Yealink's Second Amended Answer) at ¶¶ 41, 51, 61, 71, 81, 91.  The invalidity arguments Yealink advances here only concern Claim 1 of the '002 Patent, Claims 1 and 16 of the '103 Patent, Claim 1 of the '237 Patent, and Claim 2 of the '337 Patent, and are non-dispositive of the Parties' dispute.

[2] The parties present identical positions for construing "means for audio communication", "means for data communication", and "means for communication."  Barco addresses these terms together.

does not necessitate disclosure of a more specific algorithm; and (2) to the extent required, the Asserted Patents disclose uses of an algorithm sufficient for 35 U.S.C. §112(b).

### 1.    Disclosure of an Algorithm is Unnecessary

Construing means-plus-function limitations requires first, determining the function of the limitation, and second, determining the corresponding structure described in the specification and equivalents thereof. *Medtronic, Inc. v. Advanced Cardiovascular Systems, Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). "Whether the specification adequately sets forth structure corresponding to the claimed functions must be considered from the perspective of one skilled in the art." *Intel Corp. v. VIA Techns. Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003) (holding that to be found indefinite, a patent challenger needs to prove "by clear and convincing evidence, that the specification lacks adequate disclosure of structure to be understood by one skilled in the art as able to perform the recited functions".).

"[I]n a means-plus-function claim in which *the disclosed structure is <u>a computer, or microprocessor, programmed to carry out an algorithm</u>*, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm. *Aristocrat Techns. Austrl. Pty Ltd. v. Int'l Game Tech.,* 521 F.3d 1328, 1333 (Fed. Cir. 2008) (internal quotation and citation omitted).[3]    Here, both parties agree, however, that the structure is ***not*** a computer or microprocessor, but instead "an interface using a generic communications protocol." ECF 65, Ex. B. An interface is not a computer or microprocessor, so disclosure of an algorithm is unnecessary for the means-plus-function language to be definite. *Levine v. Samsung Telecommunications America, LLC*, Case No. 2:09-cv-373, 2012 WL 383647 at *19 (E.D. Tex. Feb. 3, 2012) ("special-purpose hardware is disclosed…. As a result, no

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[3] All emphasis is added unless otherwise noted.

algorithm is required."); *Key Energy Services, Inc. v. C.C. Forbes, LLC*, Case No. 2:08-cv-346, 2010 WL 2698507 at *13 (E.D. Tex. July 7, 2010) ("Because none of these corresponding structures is a general purpose computer or microprocessor, no disclosure of an algorithm is required.").

Yealink presents no authority to support the conclusion that a means-plus-function term with corresponding structure of "an interface using a generic communications protocol" requires disclosure of an algorithm.  *See e.g., Aristocrat Techns. Austrl. Pty Ltd.*, 521 F.3d at 1334 ("That description goes no farther than saying that the claimed functions are performed by a general purpose computer"); *Blackboard, Inc. v. Desire2Learn, Inc.,* 574 F.3d 1371, 1382 (Fed. Cir. 2009) ("Blackboard again argues that the structure that performs that recited function is the server computer's software feature known as the 'access control manager'"); *WMS Gaming, Inc. v. Int'l Game Tech.,*184 F.3d 1339, 1347 (Fed. Cir. 1999) ("In regard to the disclosed corresponding structure… the Telnaes patent discloses a microprocessor, or computer").  Indeed, the interfaces disclosed in the Asserted Patents' specifications (e.g., "Pre-installed USB drivers are examples" at ECF 71, Ex. A, 19:65-66) are exemplary, well-known, special-purpose hardware—*not* general purpose computers.  *Levine*, 2012 WL 383647 at *19 ("special-purpose hardware is disclosed…. As a result, no algorithm is required."); ECF 71, Ex. A, 19:65-66.  Therefore, Yealink's argument that means-plus-function terms are indefinite due to insufficient disclosure of an algorithm in the specification is unavailing.

Instead, the term should be properly construed, consistent with the specification, to encompass the identified structure of "an interface using a generic communications protocol" including, for example, the disclosed USB cables, USB plugs, and USB audio drivers, the related structural disclosures, and equivalents thereof identified in the specification.

### 2.     The Asserted Patents Disclose an Algorithm

An algorithm, to the extent required, is disclosed in association with the interface "means for audio communication" in the USB audio drivers.[4]  Yealink wrongly argues no algorithm is disclosed in the '002 Patent specification.  Yealink is incorrect in that (1) an interface (e.g., a preinstalled generic driver) includes an algorithm and (2) there is sufficient disclosure of a preinstalled generic driver to render Claim 1 of the '002 Patent definite.

A court must first determine whether there is an algorithm disclosed.  If there is, "the question is whether the disclosed algorithm, from the viewpoint of a person of ordinary skill, is sufficient to define the structure that makes the bounds of the claim understandable."  *Noah Systems, Inc. v. Intuit Inc.*, 675 F.3d 1302, 1313 (Fed. Cir. 2012).  At its core, the question is simply whether the disclosed algorithm is sufficiently definite to a POSITA.  *Sisvel International S.A. v. Sierra Wireless, Inc.*, 82 F.4th 1355, 1365 (Fed. Cir. 2023) (emphasis in original) (citing *Noah Systems, Inc.* 675 F.3d at 1313) ("for a means-plus-function limitation where the corresponding structure is an algorithm, the specification need not disclose *all* the details of the algorithm to satisfy the definiteness requirement of § 112 ¶ 2 so long as what is disclosed would *be sufficiently definite to a skilled artisan*.")  Here, the disclosed algorithm is adequately disclosed.  *See e.g.*, ECF 71, Ex. A, 11:64-12:11, 12:24-36, 14:32-46, 17:67-18:2, 19:50-20:12, 20:23-56 23:35-53, 24:4-20, 26:5-12, 29:30-55, 30:3-6, 30:36-42, 31:57-60, 32:22-33:1.

### a)     The specification discloses an interface algorithm used to perform the function.

The '002 Patent specification discloses an interface (e.g., the preinstalled generic driver) which provides audio communication between the peripheral device and the processing device.

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[4] Similar disclosures exist regarding other data drivers.  *See* ECF 71, Ex. A, 3:34-35, 8:23-26, 11:64-12:17, 32:35-41.

ECF 71, Ex. A, 19:53-65.

For means-plus-function terms, a structure constitutes "corresponding structure if the specification or prosecution history clearly links or associates that structure to the function recited in the claims." *Noah Systems, Inc.* 675 F.3d at 1311 (internal citation and quotation omitted).  The '002 Patent specification does just that.  For example, it states:

> In these embodiments, one of the pre-installed generic drivers of the operating system on the relevant computer device **31**, **36** is exploited for setting up communication from the computer device **31**, **36** to the network **50** via the connection unit **47**, (optionally **49**). The generic driver is used in connection with the connection unit **47**, (optionally **49**) operating as a peripheral device but the use can go beyond that of the standard class of peripheral devices for which the generic driver is intended. In some embodiments the connection unit **47**, (optionally **49**) operated as a peripheral device communicates with the relevant processing device **31**, **36** by using a generic communication protocol provided by the pre-installed generic driver. Pre-installed USB drivers are examples.

ECF 71, Ex. A, 19:53-65 (emphasis in original).  Here, the interface algorithm (a pre-installed generic driver) is linked to the function of providing the generic communications protocol to communicate between the processing device and the peripheral device.  *Id*.

The disclosure of a preinstalled generic driver meets Dr. Almeroth's definition of an algorithm, as it is "[s]omething in the specification to disclose the way of doing that particular function…. You could have a set of different steps or a flow chart or ***something that would inform a person of skill in the art*** how the algorithm—***how the function would be performed***."  ECF 71, Ex. L, 41:1-7.  The interface (e.g., USB interface running a preinstalled generic USB driver) provides a known generic communications protocol to allow communication between the peripheral device and processing device.  ECF 71, Ex. A, 19:61-65.  Accordingly, the '002 Patent specification discloses an algorithm, more specifically, preinstalled generic driver algorithms, such as "USB drivers".  *See e.g.*, ECF 71, Ex. A, 19:50-66; Fig 10.  Moreover, the specification provides specific examples in the form of "UAC1 or UAC2 device driver[s]."  *Id*., 6:65-67.
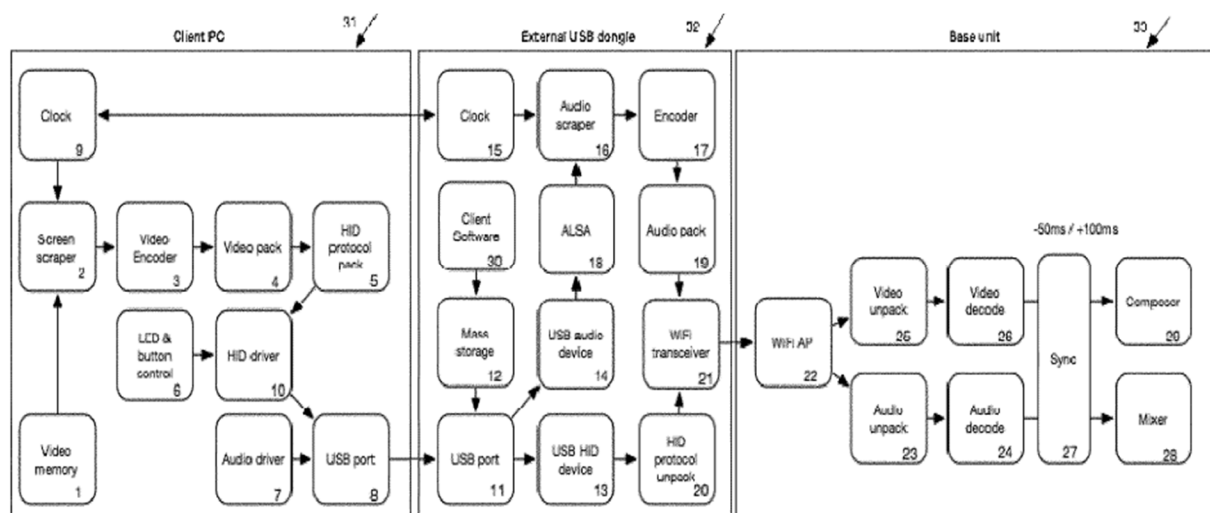
5

b)      <u>There is sufficient disclosure of the algorithm in the specification</u>

Yealink further misapplies the law regarding means-plus-function terms not being interpreted based on the understanding of one of ordinary skill in the art. ECF 74, 14. "[W]here the specification discloses *some* algorithm, even if a party contends that algorithm is inadequate, the sufficiency of the purportedly-adequate structure disclosed in the specification must be evaluated ***in light of the knowledge possessed by a skilled artisan***." *Sisvel International S.A.*, 82 F.4th at 1365 (Fed. Cir. 2023) (emphasis in original) (citing *Noah Systems, Inc.* 675 F.3d at 1313). "[F]or a means-plus-function limitation where the corresponding structure is an algorithm, the specification need not disclose ***all*** the details of the algorithm to satisfy the definiteness requirement of § 112 ¶ 2 so long as what is disclosed would ***be sufficiently definite to a skilled artisan***." *Id.*, at 1368 (citing *Finisar Corp. v. DirecTV Group, Inc.,* 523 F.3d 1323, 1340 (Fed. Cir. 2008) (explaining that a patentee may disclose algorithmic structure "in any understandable terms including as a mathematical formula, in prose… or as a flow chart, ***or in any other manner that provides sufficient structure***") (emphasis in original)).

Yealink agrees with Barco that a POSITA of the Asserted Patents would have had at least a Master's Degree in Electrical Engineering and five years of work experience in computer science and embedded systems, or a Master's Degree in Computer Science and five years of work experience in electrical and computer engineering and embedded systems, and that additional educational experience could substitute for some of the work experience. ECF 74, 7. This is a high level of skill, and provides a significant breadth of experiences and understandings.

Both Parties' experts agree that an individual with a Master's Degree in Electrical Engineering would have been familiar with an exemplary USB interface, having worked with such examples extensively when each themselves was of that skill level. ECF 71, Ex. L, 49:6-10 ("I

6

think they [somebody with a master's degree in 2011] would have been generally familiar with the protocol."); ECF 71, Ex. J, 11:18-12:1 (Dr. Brogioli explaining experience writing drivers, including USB devices), 15:7-17 ("So the patent talks about USB in a number of places…let's take a laptop in this case, has USB functionality on it.  It has various types of USB drivers or generic drivers for USB.  So that tells a person of skill reading the reference that, yes, we're talking about a system that knows how to format USB communication and send it out and receive it and so forth.").  A POSITA would also recognize the algorithm in Figure 11 of the '002 Patent:



ECF 71, Ex. A, Fig. 11; ECF 71, Ex. J, 20:9-17 ("And in sending audio in this example, there's an audio driver 7 on the client PC side that…would make a call to into the driver to send audio information that ultimately will be transmitted over the USB port 211, and it looks like here routed through—looks like there's an USB audio device 14 here….  This looks like a high level diagram to me that shows a *flow* of blocks within an exemplary system.").  Indeed, the disclosure of the '002 Patent is "sufficiently definite to a skilled artisan." *Sisvel International S.A.*, 82 F.4th at 1368 (citing *Finisar Corp.*, 523 F.3d at 1340).

Yealink also alleges the claim is indefinite because there are allegedly, and hypothetically, thousands of potentially suitable communications protocols that could be implemented.  *See* ECF

74, 11-12.  However, "breadth is not indefiniteness."  *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1367 (Fed. Cir. 2017) (internal citation and quotation omitted).  Such an argument is not founded in validity, but perhaps better characterized as a factual question for the jury to determine upon infringement.  Critically here, that inquiry is unnecessary, as Yealink's products use the *very USB embodiment* with pre-installed generic USB drivers as disclosed in the specification.  ECF 71, Ex. N.  Accordingly, Yealink's indefiniteness argument is unpersuasive regardless of whether disclosure of an algorithm is necessary.

Finally, Yealink does not itself propose any actual construction, and simply advances an invalidity argument for this term.  At a minimum, it has failed to clear the high hurdle of clear and convincing evidence that any claim of the asserted patents is invalid.

### B.    "the at least one peripheral device" (the '103 Patent)

As Yealink itself identified, "it is improper to read a limitation from the specification into the claims."  *Liebel-Flasheim Co. v. Medrad Inc.*, 358 F.3d 898, 904 (Fed. Cir. 2004).  Nonetheless, Yealink inexplicitly relies on excerpts from the '103 Patent's specification in an attempt to inject uncertainty into "the at least one peripheral device" limitation when the claim language and prosecution history is otherwise unambiguous.  ECF 74, 21 (Arguing "The *specification* discloses multiple different suitable 'peripheral devices.'").  This is insufficient to establish indefiniteness by clear and convincing evidence.

Yealink again relies on inapplicable case law.  In *Bushnell Hawthrone, LLC v. Cisco Sys.,* the court held the dispute claim was unclear when the *claim* "describe[d] three classes of IP addresses prior to the 'said different IP Address' limitation" which lacked appropriate antecedent basis.  813 Fed. Appx. 522, 526 (Fed. Cir. 2020).  Here, Yealink does not rely on language in the claim, but rather improperly relies on a description of an embodiment in the *specification*.  Yealink

provides no authority to support its allegation that disclosures of potentially multiple claim elements in the specification renders a claim limitation indefinite. Yealink's attempts to manufacture ambiguity based on potential embodiments depicted in the specification is unavailing.

While the preamble of Claim 1 of the '103 Patent recites "A computer peripheral device[,]" the later recitation of "at least one peripheral device" is explainable upon review of the prosecution history. *Home Diagnostics, Inc., v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("Another tool to supply proper context for claim construction is the prosecution history."); *See* ECF 71, 18-19. Yealink correctly identifies that "Examined claim 23 was directed at '[a]n electronic meeting tool for communicating arbitrary media content from users,' wherein the 'at least one peripheral device' was just one element of the tool" and "examined claim 29 (issued Claim 1) claimed the '[a] computer peripheral device' directly." ECF 74, 23 (Citing ECF 71, Ex. G, 1603-07). When both claims were rejected over the prior art in the *same* office action (ECF 71, Ex. G, 1338), the *same* limitation was added to both claims. *Id.*, at 1603-04.

"When the meaning of the claim would be reasonably understood by persons of ordinary skill…the claim is not subject to invalidity upon departure from the protocol of 'antecedent basis.'" *Energizer Holdings, Inc. v. Int'l Trade Comm'n*, 435 F.3d 1366, 1370 (Fed. Cir. 2006). A POSITA would understand the claimed "the at least one peripheral device" refers to the earlier introduced "a computer peripheral device" despite the omitted word "computer". ECF 71, Ex. I at ¶¶46-51; *See Energizer Holdings, Inc.,* 435 F.3d at 1371 (holding that "an anode gel comprised of zinc as the active anode component" provided implicit antecedent basis for "said zinc anode"); *see also Ex Parte Porter*, 25 U.S.P.Q. 2d (BNA) 1144, 1145 (B.P.A.I. 1992) ("The term 'the controlled fluid'...finds reasonable antecedent basis in the previously recited 'controlled stream of fluid....'"); *Fisher-Price, Inc. v. Graco Children's Prods.*, No. 05-1258, 154 F. App'x 903, 909 (Fed. Cir. Nov.

4, 2005) ("[a] claim is not invalid for indefiniteness if its antecedent basis is present by implication") (citations omitted).)

At a minimum, Yealink again has failed to clear the high hurdle of clear and convincing evidence that Claim 1 of the '103 Patent is invalid.

### C. "the audio device" (the '237 Patent)

Yealink improperly relies on disclosures in the specification to attempt to manufacture indefiniteness in an otherwise unambiguous claim. *See supra* Section II.B; *Liebel-Flasheim Co.,* 358 F.3d at 904. The meaning of Claim 2 of the '237 Patent is clear upon review of the '237 Patent's prosecution history.

Yealink misinterprets Barco's argument regarding the prosecution history. Yealink alleges that Barco's argument is wrong "because examined claim 83 (issued claim 2) was never amended during prosecution." ECF 74, 27. This is *exactly* where the lack of explicit antecedent basis originates. Because, as explained in Barco's opening brief, while Claim 83 (which issued as Claim 2) was left unamended, Claim 82 (which issued as Claim 1) originally contained the limitation reading from "the port using *an audio device* on the external peripheral device[.]" ECF 71, 21; *Id.* at Ex. H, 923. When this limitation was removed from Claim 82 (issued as Claim 1), Claim 83 (issued as Claim 2) was not amended to adjust the antecedent basis. The meaning of "the audio device" would be clear to a POSITA. *Id.* at Ex. I, ¶¶52-58.

As with the previous claims, Yealink has failed to meet its burden of clear and convincing evidence that Claim 2 of the '237 Patent is indefinite.

## III.    CONCLUSION

Defendants cannot meet their clear and convincing evidence burden to establish that any terms of the Asserted Patents are invalid, and as a result the plain and ordinary meaning governs.

10

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/s/ Erik J. Halverson
Erik J. Halverson (Bar No. 333492CA)
erik.halverson@klgates.com
**K&L GATES LLP**
Four Embarcadero Ctr., Suite 1200
San Francisco, CA 94111
Telephone: (415) 882-8238

Melissa Smith (Texas Bar No. 24001351)
**GILLAM & SMITH, LLP**
303 South Washington Avenue
Marshall, Texas 75670
Telephone: +1 903 934 8450
Facsimile: +1 903 934 9257
melissa@gillamsmithlaw.com

Christopher Centurelli (*pro hac vice*)
christopher.centurelli@klgates.com
Anna E. L'Hommedieu (*pro hac vice*)
Anna.lhommedieu@klgates.com
Joshua N. Andrews (*pro hac vice*)
Joshua.Andrews@klgates.com
**K&L GATES LLP**
1 Congress Street, Suite 2900
Boston, MA 02114-2023
Telephone: (617) 261-3100

*Attorneys for Plaintiffs*
*Barco, Inc. and Barco N.V.*

## CERTIFICATE OF SERVICE

I hereby certify that on February 18, 2025, all counsel of record who have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system pursuant to Local Rule CV-5(a)(3).

/s/ Erik J. Halverson
Erik J. Halverson

11